

ABSTRACT

**LIQUID PHASE LOW TEMPERATURE METHOD
FOR PRODUCTION OF METHANOL FROM SYNTHESIS
GAS AND CATALYST FORMULATIONS THEREFOR**

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The invention provides a homogenous catalyst for the production of methanol from purified synthesis gas at low temperature and low pressure which includes a transition metal capable of forming transition metal complexes with coordinating ligands and an alkoxide, the catalyst dissolved in a methanol solvent system, provided the transition metal complex is not transition metal carbonyl. The coordinating ligands can be selected from the group consisting of N-donor ligands, P-donor ligands, O-donor ligands, C-donor ligands, halogens and mixtures thereof.